

An Inquiry into the Deflationary Spiral, And On the Value of the Small Sized Farming: As an Example in Yamanashi Prefecture

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0. Introduction, or as a Summary of this Paper

In this paper, I will inquire the economy of Yamanashi Prefecture, especially into its deflationary spiral. We are suffering from the serious deflation in Japanese economy. The deflationary spiral is a very serious problem in the Yamanashi Prefecture economy, too. I will clear the economic relations of the deflationary spiral in Yamanashi Prefecture economy. The Yamanashi Prefecture economy also represents the other prefectures' economy of Japan. The economic figure of Yamanashi Prefecture is the same as the figure of the Japanese economy itself¹. Thus we will know the deflationary spiral is very serious problem in all prefectures of Japan commonly.

Then I will have to consider the way to go through the deflationary spiral. In this paper, we will approach the way with the view of a citizen, not only with an economic view. Now we have to have a viewpoint widely to solve some problems. In this paper, I paid attention to the primary industry, especially agriculture or farming. Nowadays there are many people who are interested in nonprofessional farming, in Japan. We need to utilize their power. And we can do it. In fact, I have practiced a small sized farming for a long time, even though I am not a farmer. I will introduce our practicing and studies in this paper.

At the end of this paper, I will synthesize contents of our studies. Then I will propose our thoughts to go through the deflationary

spiral.

1. Yamanashi Prefecture Economy from 2001 to 2013, Its Serious Deflationary Spiral

First of all we will inquire the Yamanashi Prefecture economy, using the *Kenmin Keizai Keisan Nenpo* (Yamanashi-ken [2016]). According to some inquiries using the data, we can get a picture of the serious deflationary spiral in Yamanashi Prefecture economy as follows. We will see its situation and substance in detail in this chapter.

1-1. Economic Growth Rate

See the table 1-1. We can confirm the followings from the table 1-1. Firstly, Real economic growth rate in Yamanashi Prefecture has some up-and-down waves. But the plus rates are much more than the minus rates during the period. As a result Yamanashi Prefecture economy has moved along a growing process since 2002.

1-2. Deflator

But secondly what we must recognize is that, we are in the serious deflationary spiral in the period and to the present.

To know the serious deflationary spiral, we will look at Deflator in the table 1-1. The deflator is consistently declining from 2001 to 2013. The deflator was 110.2 in 2001. But the data shows 88.8 in 2013. It is fall about more than 20 points over only the 13 years. We

Table 1-1.

Fiscal year	Real economic growth rate (%)	Deflator	Compensation of employees (increasing rate) (%)	Entrepreneurial income (increasing rate) (%)	Wages · Pay (increasing rate) (%)
2001		110.2			
2002	1.1	107.6	-1.0	1.5	-2.6
2003	2.3	105.0	-1.8	6.5	-1.0
2004	3.5	102.3	-2.5	12.0	-1.4
2005	3.1	100.1	-0.2	0.2	0.3
2006	4.5	98.0	0.2	3.1	0.0
2007	2.0	96.1	-0.4	-2.4	-1.2
2008	-1.4	93.8	-2.0	-8.1	-2.2
2009	-6.3	93.9	-5.6	-7.6	-6.6
2010	9.7	91.2	-0.3	44.0	-0.3
2011	2.8	89.2	-1.8	10.4	-2.9
2012	-2.2	88.8	1.2	-8.3	0.8
2013	1.2	88.8	-2.0	11.2	-1.7

Source : Yamanashi-ken [2016]

don't know that we had so sever deflation of Yamanashi Prefecture economy in the past. Certainly this sever deflation has not arisen since the end of W W II, so that it is the first experience in Yamanashi Prefecture economy.

Why do we have the so sever deflation in Yamanashi Prefecture economy, and also in Japanese economy? There are some economic reasons. We will consider the economic reasons and relations later. In the next section, we will confirm the context and contents of the sever deflation more profoundly in detail.

1-3. Compensation of Employees, Workers' Wages

The table 1-1 also presents Compensation of employees (increasing rate). This is similar to workers' income. When looking at the data, we will see many minus marks there. There are the plus marks only in 2006 and in 2012. Except the two years, every year shows minus. We can know that the compensation of

employees, or the workers' income, is declining year after year.

The table 1-1 also shows Wages and Pay (increasing rate). This is the employees' and workers' wages or pay. This data also shows many minus marks. It marks plus only in 2005, 2006, and 2012. But the plus point is not so large one. It is from 0.0 to 0.8, in short, it is on the about 0 percent level.

The point of this section is that, although the economic growth rate is increasing, workers' income or wages and pay have been decreasing to the present since 2001. The severe deflation affects the decreasing of the workers' income in this way in Yamanashi Prefecture.

1-4. Entrepreneurial Income

We could know the severe condition for the employees or workers. On the other hand, looking at the table 1-1, Entrepreneurial income (increasing rate) is growing. What we

call, performance in companies or business is good one in the period, regardless of the severe deflation and the severe condition for the employee or workers in the above.

For example, even though Entrepreneurial income (increasing rate) has some minus rate, the plus rate is much more than the minus one. The rate was 44.0 in 2010. This is a tremendous level. And more than 10 percent level is not few in the period. The entrepreneurial income, business income, or business profit are growing. Obviously company gets more earning, and makes gains in the period.

As a result we can get the two contrary situations in this section. Compensation of employees, Wages, and Pay are decreasing, and are not in a good performance; to the contrary, on the other hand the gains of the employer or company are increasing.

We will confirm this contrary situation in detail in the next section.

1-5. Distribution between Employer and Employee

We confirmed a trend in economic growth, and also a situation between employees and employers from the table 1-1 in Yamanashi Prefecture. Then we made the table 1-2, using the same source of the table 1-1. We can confirm the distribution between employees and employers with the table 1-2. The table 1-2 presents the increasing rate and the component rate between the employees and the employers. According to macro-economics, GDP (distribution) is composed of two categories mainly, namely the compensation of employees and the operating surplus of employers.

Seeing the table 1-2, Compensation of employees (increasing rate) shows many minus rates. As we confirmed above, this is the same result as the table 1-1. The compensation of employees is declining, as like as Wages and Pay, which were declining in the

Table 1-2.

Fiscal year	Compensation of employees (increasing rate) (%)	Operating surplus, Mixed income (increasing rate) (%)	Compensation of employees (component rate) (%)	Operating surplus, Mixed income (component rate) (%)
2001			54.6	17.5
2002	-1.1	0.1	54.7	17.8
2003	-1.7	6.2	53.9	18.9
2004	-2.7	10.3	52.0	20.7
2005	0.0	1.7	51.5	20.8
2006	0.2	7.7	50.5	22.0
2007	-0.5	-1.3	50.2	21.7
2008	-2.1	-11.5	51.1	19.9
2009	-5.7	-11.8	51.3	18.7
2010	-0.2	41.6	48.1	24.8
2011	-1.9	7.3	46.9	26.5
2012	1.4	-10.4	48.8	24.3
2013	-2.1	7.6	47.3	25.9

Source : Yamanashi-ken [2016]

table 1-1. This is an impact and influences from the serious deflation.

In addition, the Compensation of employees (component rate) also shows a declining trend. During the period the rate obviously declined from 54.6 to 47.3. This is also caused by the serious deflation. The impact or influence of the deflation makes the two rates declining.

Meanwhile, how about is the data on the employers or companies? To confirm them, we will look at the Operating surplus, Mixed income in the table 1-2. The data at increasing rate has some large waves. But the data at the component rate is obviously increasing from 17.5 to 25.9. It is about 10 percent increasing.

In this section we can confirm that, the distribution to employees is down, on the other hand the distribution to employers is up. The distribution between employees and employers is that, employers have more advantage than employees. It is clear, beyond question. This is a conclusion in this section from the data.

1-6. A Reason for the Conclusion

We have left one question. It is that why the advantageous situation to employers arises. But the reason is simple, in a word, it is the above severe deflation.

In other words, in the above severe deflation, employers or companies make employees' and workers' wages decrease. As a result the advantageous situation to the employers has arisen. We can suggest the conclusion and its reason with the relation to above contents.

1-7. Stagnation of Consumption Expenditure

We have confirmed the severe deflation, the declining of workers' wages or income, and the increasing in business income. Also we confirmed advantageous situation to the employers. But these conditions must cause the foreseeable problem next. The problem is the

stagnation of consumption expenditure and of spending in the household. We will consider this problem in this section.

Let us see the table 1-3. We made this table, using the same source as the table 1-1 and 1-2. The table 1-3 shows mainly consumption and savings of household in Yamanashi Prefecture. As a telling from the macro-economics, the household income will be divided into the two sectors. Basically one is consumption expenditure, and the other is savings. These two sectors will compose the GDP expenditure.

We can confirm, as a conclusion in this section, the household consumption expenditure is declining, and savings of them are increasing.

The Consumption expenditure (increasing rate) shows many minus rates in the table 1-3. And the Consumption expenditure (component rate) shows a trend of declining. In 2001 the rate was 70.5. But in 2013 the rate is 58.2. This is a tremendous fall.

A reason of this fall may be the deflation and the declining of workers' wages, as we have stated. It is necessary for the household to save and not to waste in the deflationary economy. Saving is the most important thought and also is one of morals for the Japanese in the depression of economy. In addition, workers' wages have been declining to the present. For the household, they can not help saving.

As a result, eventually Savings (increasing rate, component rate) and Rate of savings are increasing during the period in the table 1-3. And also Rate of savings is getting higher and higher, nearly to 10 percent nowadays.

In this way the household does not spend much money. And the stagnation of consumption expenditure comes in Yamanashi Prefecture economy. This relation means that, many goods are not bought, can not be sold, and the service are not used, with money. For the household, they would like to spend mon-

Table 1-3.

Fiscal year	Consumption expenditure (increasing rate) (%)	Savings (increasing rate) (%)	Consumption expenditure (component rate) (%)	Savings (component rate) (%)	Rate of savings (%)
2001			70.5	7.2	-0.6
2002	-2.7	18.3	68.9	8.5	3.1
2003	-5.7	38.1	65.3	11.8	8.7
2004	0.3	0.7	65.3	11.8	6.6
2005	2.7	-8.1	66.3	10.8	4.4
2006	5.9	-27.9	69.6	7.7	-0.3
2007	-3.2	13.8	68.1	8.9	1.4
2008	-1.1	-28.1	69.5	6.6	-0.3
2009	-5.7	-25.2	69.5	5.2	3.1
2010	-4.6	232.6	60.8	15.9	8.0
2011	-2.0	19.0	58.2	18.5	8.2
2012	3.0	-16.8	60.9	15.6	6.5
2013	-1.6	24.0	58.2	18.8	7.2

Source : Yamanashi-ken [2016]

ey, and want to buy some goods and service; however they can not do that, because they do not have much income enough to do that. As a result, the sever deflation has arisen with the stagnation of consumption expenditure in Yamanashi Prefecture economy.

It is just a worse cycle. And this is called the deflationary spiral. Yamanashi Prefecture economy has fallen into the worse cycle and the deflationary spiral entirely. We can conclude that in this section.

1-8. A Reason for Business Income Growing

We have still some questions to consider more in detail. We are in the serious deflationary spiral; nevertheless there are good conditions for the employer in this situation, as we stated and confirmed from 1-4 to 1-6 in this chapter. In addition, the business income also has been increasing, as we confirmed from the table 1-1 and 1-2. These situations have been making some advantageous condition to

the business and companies.

Now we have to inquire some questions still more, first one is that how companies can get profit, and where they get incomes from, regardless of the stagnation in household consumption expenditure. In general, when the household income decreases and their consumption expenditure is decreasing, companies are supposed not to get profit, and they can not get incomes; because their goods and services should not be bought. However they could get profit, as we stated in 1-4. This will be a paradox.

We have to solve the paradox in this section with the table 1-4. The table 1-4 shows the component rate of every item in Yamanashi Prefecture's GDP expenditure. As using this data, we can investigate the paradox.

Every item in the table 1-4 is declining during the period, except for Consumption expenditure of prefectural government and Exports-

Table 1-4.

Fiscal year	Consumption expenditure of private section (component rate) (%)	Consumption expenditure of prefectural government (component rate) (%)	Gross fixed capital in prefecture (component rate) (%)	Increase in stock (component rate) (%)	Exports and Imports (included trading with other prefectures, component rate) (%)	Balancing sector (component rate) (%)
2001	65.9	20.9	28.3	-1.0	-9.8	-4.2
2002	54.9	21.2	26.7	-0.9	-9.0	-2.9
2003	61.3	21.4	26.0	-0.7	-7.0	-1.0
2004	61.0	21.4	25.8	0.7	-6.3	-2.5
2005	62.0	21.5	25.6	-0.1	-3.4	-5.6
2006	64.2	20.9	24.9	0.2	-3.0	-7.3
2007	62.2	21.1	23.9	0.1	-1.9	-5.4
2008	63.9	21.9	23.3	1.3	-4.2	-6.4
2009	64.3	23.4	21.7	-2.2	-6.0	-1.1
2010	57.6	22.1	21.7	0.3	-0.6	-1.2
2011	56.1	22.4	21.4	0.8	-0.5	-0.2
2012	59.3	22.9	22.4	-0.5	-3.1	-0.9
2013	57.2	22.8	24.0	0.3	-2.1	-2.1

Source : Yamanashi-ken [2016]

and-Imports. What does it mean? Is it possible for business to grow in this condition? And is it possible for companies to get profit? Ordinary it is impossible.

However we must pay attention to Exports-and-Imports, or trade. Only this item makes its rate increase largely. This means that, exports increase, and imports decrease. In that case, the balance of exports-and-imports makes their minus points decrease. The decreasing of minus points means just an increasing in the period. In fact, in the table 1-4 the minus points of Exports and Imports are declining from -9.8 to -2.1, which means increasing with +7.7 percent up as a result.

That is to say, we are in the severe deflation and stagnation of consumption expenditure, so that imports are decreasing, on the other hand exports are increasing; and increasing of exports is much more than de-

creasing of imports. As a result the balance of exports-and-imports is increasing. Thus we can understand that question: how the companies get profit in this stagnation. A reason has just been clear. It is from exports which we stated above.

In short companies get profit from overseas, although we are in the stagnation and deflation of the home economy.

1-9. An Analysis of Industries

By the way, what kind of businesses or industries especially can increase their output, and can get profit through the increasing of their exports, regardless of the deflation and stagnation? We will approach this question in this section.

To tell you the truth, it is difficult for us to answer the question. Because one reason is that, we do not have much proper data to an-

Table 1-5.

Ranking	Industries
1	Public service
2	Electrical machinery
3	Ceramic, stone and clay products Communications Non-profit service for households
4	Agriculture Forestry Transport
5	Textile products Chemical products Non-ferrous metals Metal products
	General machinery Retail trade House rent Broadcasting Business service
	Public administration

Source : Yamanashi-ken [2016]

swer that question in the statistical source (*Kenmin Keizai Keisan Nenpo*), which we have been using in this paper. We can not get statistics on the exports of every industry from this source enough. And another reason is that, output of businesses and industries also have changed ever year. The increasing rate of their output has plus rates in some years, but it has minus rates in other years.

However we will adapt the next approach. We picked up the industries which do not have minus rates in their output increasing from 2001 to 2013. And we ranked them from the 1st to the 5th in the table 1-5. In short, the table is an order list of the industries at the best 5, which do not have minus increasing rates on their output in the period.

When we look at the table 1-5, there are some businesses and industries in it. (Public service and Public administration are not the object to be investigated.) But many industries in the list probably get profit overseas, as we stated in 1-8.

Now we have to pay an attention that, Agriculture and Forestry are ranked in the 4th in the table 1-5. They are the primary industry, what we call, and they do not have a relation with foreign trade so much. As to these primary industries, we will approach in the next chapter again.

1-10. Expenditure of Business Income

We understood the business income comes out from exports in this deflation and the stagnation. The company also can get much income. Then the last question in this section is that, how the business income is spent on. According to macro-economics, the business income will be spent on mainly two sectors. One is employees' wages, and the other is investment in plant-and-machineries, and so on. But the employees' wages are declining, and the investment from companies also was decreasing, as we confirmed in 1-3. What is the business income used to on earth? We will approach this question in this section.

The table 1-6 is the component rate of the expenditure in business income. We can confirm that, companies get profit in the period obviously. Property income and Distributive income are increasing. (The latter is included to the former.) Distributive income may be the same as the business income of the company. It was increasing, as we had confirmed in the table 1-2.

Moreover we must confirm from the table 1-6 that, Savings are increasing highly, from 22.2 to 46.2, much more than twice. And it is 46.2 in 2013. Does it mean that, companies are saving nearly the half of their profit on the average? We can not check it from only these data.

However it means that, companies have no-

Table 1-6.

Fiscal year	Property income (component rate) (%)	Distributive income (component rate) (%)	Savings (component rate) (%)
2001	22.2	6.5	22.2
2002	20.8	8.4	22.8
2003	20.4	8.6	26.7
2004	24.0	12.7	29.7
2005	26.5	16.2	34.5
2006	30.6	20.1	33.8
2007	28.0	16.3	34.3
2008	30.5	18.5	35.7
2009	28.5	16.6	35.6
2010	24.3	14.5	49.7
2011	25.2	17.3	50.5
2012	26.4	18.3	46.7
2013	35.5	26.0	46.2

Source : Yamanashi-ken [2016]

where to invest in. And there is no effective place to invest in for business. Then the savings are accumulating every year, leaving profit not spending. This kind of saving is called *Naibu-Ryuho* in the Japanese economy nowadays. The savings of companies are increasing in Yamanashi Prefecture, too. As a result, we can also confirm that, the deflationary spiral is very serious in this section, too.

1-11. Conclusion in this Chapter

We confirmed in this chapter that, in Yamanashi Prefecture economy, the deflationary spiral makes the workers' wages decrease, the household incomes and expenditure falling; then goods and services produced by companies are not bought. Because the goods and services are not able to sell at an expensive price, companies will make their costs down more severely, especially their personnel cost, or workers' wages. In this way, workers' wages and incomes decrease.

On the other hand, companies will make gains through exports, in fact they can do that recently. However, even though companies get gains though exports, they have no effective places to invest in by spending their gains. The gains of companies do not come to the workers' incomes, and then savings of companies are increasing. As a result, the deflationary spiral gets more serious in Yamanashi Prefecture economy. This is the conclusion in this chapter.

Sincerely Yamanashi Prefecture economy has fallen into the serious deflationary spiral, and can not get rid of it.

2. On the Primary Industry and Small Sized Farming

2-1. Viewpoint of a Citizen

We have confirmed the serious deflationary spiral of Yamanashi Prefecture economy. We will consider the way to go through the deflation from this chapter. And we will consider

it in view of one citizen, not of the business, more widely. We will adapt the viewpoint of a citizen, the reason is the following.

When we limit our viewpoint on many problems to the business and economical thoughts, some problems will not be solved, we think. Nowadays problems are widely, and objections to consider solving them are very various, as I state below. Our viewpoint should not be limited to the business and economical thinking. Is it possible to make a business, or not? And how much does the business have the economic effects, or get profit? Only these quests should not be enough to those various problems. More widely we should consider the ways to solve the problems. We would adapt the viewpoint of the citizen, the reason is above.

I have always suggested above thought and plan, also published many papers and a book. I will propose the contents in them again to you, or to English readers in this paper.

2-2. A Trend to Practice Small Sized Farming among Nonprofessionals in Japan

I have proposed a small sized farming for the people who are interested in agriculture. There are many people who are interested in small sized farming in Japan, especially in overpopulated cities, even though they are not professional farmers. They have no land to do agriculture in the overpopulated area, nevertheless they would like to do farming works.

I have recommended these people to doing some small sized farming, and introduced some types of the small sized farming. In Japan, we have some types of small sized farming nowadays. For example, *Hitotsubo-Nouen* in Japan, Klein Garten as like as in Germany, *Akiya-Bank* in Japan, *Nouchi-Ginko* in Japan, Green Tourism, and so on. And I have suggested that, these types of small sized farming should spread among them in Japan.

Actually I also have practiced the small sized farming about for twenty years. In this chapter, I will state the contents and our studies of my actual practice in detail.

2-3. Our Practicing and Studies

I stated above I have practiced the small sized farming actually. The detail is the followings.

I am not from a family of farmer, and do not own lands for agriculture in my family. The land I use for agriculture is the holding. In English I am a tenant. Maybe you are going to ask me how much holding I cultivate. It is about 10 ares area. (1 are is 10 square meters in area.) I cultivate the holding. You may call the holding the patch in English. I grow many kinds of vegetables there. The area for growing vegetables is about 3 ares area. And I also grow rice in 6 ares area without using machinery, by hand. As you know, the rice is the main food in Japan.

Furthermore maybe you ask me. For the rice cropping, is not it necessary to use some machinery? It should be necessary to use machinery, for example when planting or reaping. However I do not use machinery, although using some tools for agriculture works².

Moreover, I am using no agricultural chemicals, and no chemical fertilizer. I use the compost as fertilizer, which I make from garbage, fallen leaves, and weeds. This style of farming is, what we call, the organic farming.

Ever year I can get rice harvest which my family needs to eat in one year. And I can sell the surplus rice harvest, because I can get the surplus rice harvest more than the necessary rice harvest we need to eat in my family. In addition, because the rice is the main food for the Japanese, and the organic rice has a great demand in Japan now; so the price of the organic rice is expensive, if you buy it in a market.

When we consider what can make it be

possible for us to do our farming without using machinery, although we are nonprofessional farmer; the answer is the small sized farming. Because of the small sized farming, I can do the above agriculture without using machinery. And the small sized farming is enough to get rice harvest for living needed in my family, which has 3 members.

We call these merits the small merit, not the scale merit. The small merit will be stated in the later sections as some benefits and advantages of this small sized farming.

By the way, if you are interested in the small sized farming, and want to do the farming as like us, you can get even the rice you need in one year without spending much money.

2-4. Cost, Working Hours, and Profit

You maybe want to know the cost, working days and hours, and profit on my farming. I will answer the questions in this section.

On the cost, I do not need cost so much. On the money, it is enough to spend 2,000 yens a month. Because I can sell my surplus rice harvest to our acquaintances, and the organic rice has a great demand in Japan, as I stated; the organic rice and vegetables are not inexpensive in Japan now. Returns from selling our organic rice may be more than the cost to need for its culture.

Of course we can not get income enough to make a support for our living from our small sized farming. The income or profit from our farming is slight one. But we do not hope so great income and profit from our farming. Because I have a regular another working to make a support for our living; even if the income from our farming is a slight one, it is enough.

Furthermore you ask me that, how long I work for the farming in my holding. The answer is about from 1.5 to 2 hours in a day on the average, and I have a holiday in a week. As I stated, because of the small sized farm-

ing, it makes me possible to do agriculture about from 1.5 to 2 hours in a day indeed. And I have another working like this studying, and so on. I can not do only the agriculture in all day.

What is the benefit of our farming? On the money profit, I stated above. The benefit is not limited to that. Without the money profit, we have some benefits on small sized farming. I will state them in the next section.

2-5. Some Benefits and Advantages

2-5-1. Economy

Firstly we can get many vegetables, and rice needed for my household in one year from my farming. And they are really fresh. Moreover they are organic farming products. In Japan the organic vegetables are expensive when you buy them in the market. They are about twice as much as normal vegetables at the price in Japan.

We can get fresh organic foods from my farming without spending some money. It is truly economical. I have investigated which is more economy the usual farming, or my farming. The answer was mine. (See T. FUKASAWA [2014 a].)

In this way, to get fresh organic foods without spending much money, this is the first benefit, I think.

2-5-2. Health

Secondly, the farming has the benefit to person's health in physically and mentally. I have no stress when doing my farming. Of course I am often tired physically from hard works in farming, because of using no machinery, however a sense of achievement and a sense of fulfillment are much more significant than the tiredness in farming. And we can really feel a sense of belonging to great nature. In those means I feel no stress mentally. Agriculture or farming is good for person's health, in those means.

2-5-3. Environment ① For a Society Harmonized with Nature, or a Society Circulating in the Environment

Thirdly, it is the benefit to the environment. Now we have some problems on the environment in Japan, and all over the world. For example, wasting of fossil fuel, overproduction of CO₂, global warming, problems on waste treatment, and so on.

We have studied the input-and-output analysis of energy in the usual farming, and compared input energy and output energy in the usual farming. As a result, we could indicate that, input energy is more than output one. That is to say, the usual farming must waste a great deal of fossil fuel as the energy. And if we could not get oil enough, we would not be able to do the usual farming, and also would not be able to get agricultural foods. In these situations we must mend our ways wasting natural resources. (See T. FUKASAWA [2014 a], D. PIMENTEL et al. [1973].)

Then as a solution we can, we now commonly state the followings. That is to say, to make up a harmonized society with nature, and to transfer from mass production, mass consumption, and mass waste-producing society, to a circulating and recycling society with nature.

Now what we must pay attention to transference to the society is that, the primary industries and the agriculture play a very important part from now. We can have a life with nature through to doing farming. We can play a part to transfer to the circulating and recycling society through to doing farming.

Small sized farming will make us be possible to set up the harmonized society with nature, and to transference to the circulating and recycling society in our environment. On the above problems and for their solution, because of not using machinery when doing farming, we do not have to rely on fossil fuel. Because of doing the organic farming, we can utilize garbage and waste without relying on fossil

fuel. There is no wasting some given limited resources in our organic farming.

What we can do as a citizen for the earth, and to make the solution to some environment problems, is maybe simple things indeed. One of them is our taking part in the small sized organic farming, we think. We want to propose it here again with the relation to above contents.

2-5-4. To Close Connection Between City and Countryside

The benefits are not end in those. We have still more problems in Japanese society. For example, one of them is desolation in villages especially around mountains. They are in the under-populated area, and there are few aged persons in the areas. Their children as successors have left the villages, gone to the city, and had their life there. The aged persons left in the village can not work, and even can not do cultivate their land for farming. The land not cultivated is getting increase in these areas. We call the situation *Kousaku-Houkichi no Zoudai*, and *Kasoka* in Japanese. This is one of the serious problems in Japan. The village of *Kasoka* is getting more desolate in this way in Japan now.

Meanwhile, surprisingly there are many persons who want to do farming in cities, as I stated in 2-2. What a paradoxical and contrasting appearances between in the city and in the desolating village are!

We have proposed the small sized farming for the people who are interested in doing farming, especially for the people in the city. And also we have proposed that, we have to utilize the *Kousaku-Houkichi* for those people. On the utilization, we have some ideas, and these ideas are going to be practiced in Japan nowadays.

In this way, we propose again taking part in the farming, especially in the small sized farming for the people who are interested in farming. And we also propose the utilization

of the *Kousaku-Houkichi* in desolated villages in Japan, in order to collect the people who are interested in farming. To utilize *Kousaku-Houkichi* with the small sized farming, I think it is the fourth benefit of the small sized farming.

In addition, if the people who are interested in small sized farming come to countryside from a city, and do farming; we can have a close connection between cities and countryside. We should ask the connection to restore the *Kousaku-Houkichi* through some policies. The small sized farming will be available to set up the close connection between cities and countryside.

2-5-5. Environment ② Biotope and Ecosystem

As the fifth benefit, we will return to environmental problems again. The problem on the environment is not limited the above ones stated in 2-5-3. What we will consider here is the biotope and the ecosystem.

We have so many endangered species in Japan now; due to, what we call, the environmental disruption. What is the reason for the environmental disruption ? There are many reasons for it. But one reason is clear. It is overusing of agricultural chemicals. Their overusing is going to destroy the biotope and the ecosystem. Then we must decrease using agricultural chemicals to protect the biotope and the ecosystem, where many endangered species are living in.

However ordinary farmers in Japan usually can not but use agricultural chemicals to prevent their vegetables from harmful insects. They will not be able to sell vegetables which insects bit into. And consumers will not buy these vegetables. Even though vegetables without using the agricultural chemicals would be needed for the person's health essentially, but consumers will not buy the vegetables if the vegetables are bitten into by insects.

Nowadays we have a great demand for organic vegetables in Japan, as I stated in 2-5-2. We can understand the trend of demand for the organic vegetable from the reason of person's health.

But for the farmer, they will not do the organic farming. The reason firstly is that, to grow organic vegetables needs very hard working because of no using the agricultural fertilizer and chemicals. Secondly due to needs for the very hard working, the farmer must set his price of organic vegetables a little more expensive than the price of ordinary vegetables comparatively. But consumers will not buy the expensive vegetables, and will buy inexpensive ones at the price. In addition, the organic vegetable may have a possibility of biting by insects. The consumer will not buy it. These are main reasons why the farmer will not do the organic farming in Japan.

Essentially the organic farming is needed for the health of persons, but it is not going to be practiced in fact. This is a contradiction.

However when you do farming in a small sized farm, it is possible to do the organic farming like us. It is possible because of the small sized farming, no using the chemicals. And if you find a few holes on your vegetables which an insect may bite, then you really know the vegetables are good ones, because of using no the chemicals. And if you do not like the holes on vegetables, you can get rid of them easily.

In other words, the point of this section is that, it is much more advantageous for doing the organic farming to practice in the small sized farm, rather than to do in a large farm. For example, when we have to weed out of our land in farm, we will be able to finish the weeding using no weed killer, because of our land of farming is small one. For the organic farming, the small sized farming has more merits and advantages than the large sized farming.

Then as you know, when you practice the

organic farming, because of using no agricultural chemicals and weed killer, your practice is going to keep the ecology for living things, and hold our nature and environment hereafter. This is also going to protect the biotope for living things and the ecosystem itself. You will be able to protect many endangered species around us living with. In fact, there are so many useful insects in my patches, owing to using no the agricultural chemicals and weed killer. (See T. FUKASAWA [2014 a].)

This is the fifth benefit of the small sized farming for to protect the biotope and the environment.

3. As a Conclusion, To go through the Deflationary Spiral with the Small Sized Farming

I have stated some contents of the small sized farming since the preceding chapter. In this chapter, I will consider the way to go through the deflationary spiral, which we confirmed in chapter 1, in view of a citizen, not of the business and profits. The importance of this viewpoint was stressed in the chapter 2. In this chapter, I will consider the way to go through the deflationary spiral with the small sized farming, which citizens can take part in. A way to go through the deflationary spiral with the small farming is also namely the sixth benefit of this farming.

The advantage of the small sized farming is, in short, firstly the independence of the market mechanism. And secondly the advantage is the economy and ecology created by nonprofessional farmers, or citizens. Therefore due to we have the small sized farming, we are not influenced by the market mechanism and the price mechanism in some degree. Also we are not affected by the profits of business. Overall, this is the last merit and benefit which I need to tell you in this paper.

When you are in a place where you have no relation with the business and the price mechanism, you have also no relation with the

business cycle and even the deflationary spiral. There are no prosperity and depression of the economic business cycle, too.

Now we think that, we have to make a place where we have no relation with the business and the price mechanism, and make us put on the place in our life in some degree. Furthermore, we have to have a category or a territory which is independent of the business, profit, price, and economy.

Certainly the market mechanism and the price mechanism have some advantages and some merits in our economic life. They make our spending economical one. But we should not be controlled by them at all.

The deflationary spiral has been serious in Yamanashi Prefecture, as we confirmed in the chapter 1. Prices have been falling year after year. Workers' wages are decreasing, too. Is it really economical one? These results come from the market mechanism and the price mechanism at all. We are suffering from the theory of the market, even though an economist says that the market mechanism is working usefully all the time. But when we look at the real serious deflationary spiral like that and look at our real life, is the economist's talking really true? We can not but have a question on his talking.

In this situation on the other hand, some people have begun to seek a lifestyle which is independent of the market theory. As I indicated in 2-2, some people are interested in farming, even though they are not the professional farmer. They also are interested in the organic farming, even though it is not economical one. They ask a life style which is independent of the market theory, for the farming.³

In these relations, we will propose the small sized farming for the persons who are interested in it. And for the nonprofessional farmers. On some benefits of it, I have stated in the section 2 of this paper. As a way to go thorough the deflationary spiral, as a seeking

a life style which is independent of the market fundamentalism, and as a the trend to ask for the farming, we will propose the small sized farming again in the end.

Notes

1. As to my other papers on the examination into Yamanashi Prefecture economy, see T. FUKASAWA [2014 a, b, 2015, 2016] .
2. As an agricultural machine, now I use an *Ashibumi-Dakkokuki*, which is a cheep thresh machine as like as a tool. It does not have an engine, and need no use oil.
3. Nowadays a theory of prosumer has appeared. “Prosumer” is a recent coinage, (producer + consumer) . We call it *Seisanteki-Shouhisha* in Japanese. It means a person who is a producer and a consumer simultaneously. He is producing some goods and items by himself, and is consuming them in his life. The farmer is a good example for it. A point of the prosumer theory is a connection of production with consumption. It has a viewpoint of undivided relationship between production and consumption. And it has an idea beyond the sell-and-buy in a market. The theory of consumer will have a possibility of integration with small sized farming, which I have stated in this paper. The inte-

gration and its introducing to our studies are going to be an object of our new next study.
(See T. FUKASAWA [2014 a].)

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